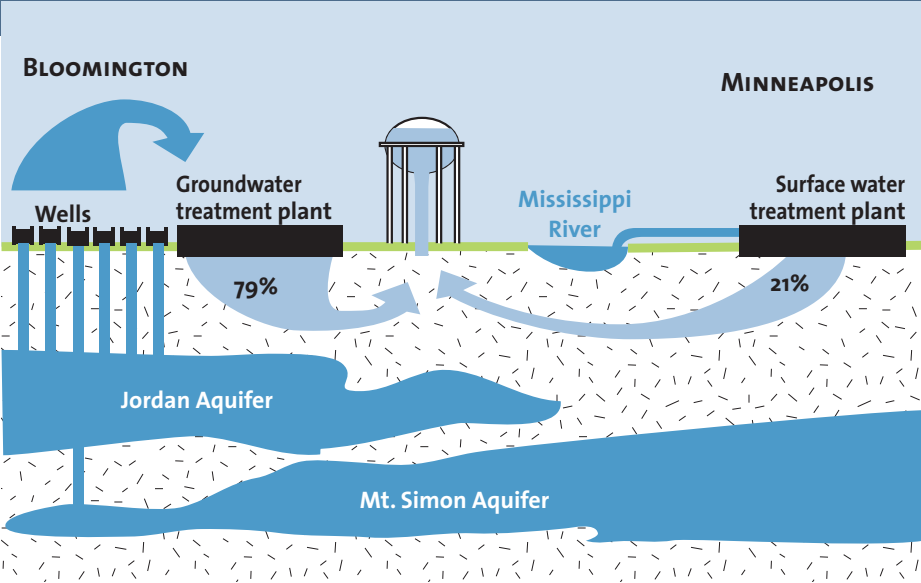


## WHERE DOES YOUR TAP WATER COME FROM?



WITH THE REMODELING OF THE SAM H. Hobbs Water Treatment Plant completed, the City is now able to produce fourteen million gallons of treated, drinkable water per day – doubling its capacity.

### BLOOMINGTON WELLS 79 PERCENT IN 2004

In 2004, our water plant drew raw (untreated) groundwater from six deep wells. The wells extend downward between 376 and 963 feet into the Jordan and Mount Simon aquifers; porous underground rock formations that hold vast amounts of water.

We drew 3.6 billion gallons of water, 79 percent of our City's needs, from these deep groundwater wells in 2004.

### MISSISSIPPI RIVER 21 PERCENT IN 2004

To meet demand in excess of our production capabilities, we purchased treated water from the City of Minneapolis. Treated water from our plant is blended with similarly treated water from Minneapolis and sent throughout our City's distribution system. All of our consumers receive a blend of water from these two sources.

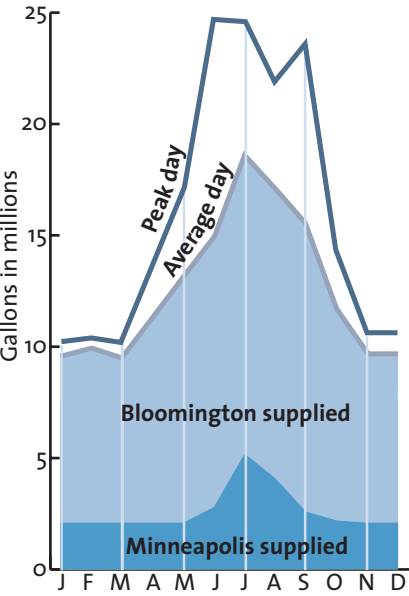
Minneapolis' surface water treatment plant takes its raw water from the Mississippi River. In 2004, the City purchased 972 million gallons of water from Minneapolis, which supplied the remaining 21 percent of our water needs.

## HOW MUCH IS USED?

IN 2004, RESIDENTS AND BUSINESSES in Bloomington used 4.6 billion gallons of water, down from 5.0 billion in 2003. This works out to about 12.6 million gallons of water per day last year.

The chart below shows the peak day and average day of water use for each month during 2004, as well as the average amount of water treated at our plant and purchased from Minneapolis. To get a more accurate picture of the actual amounts of water consumed, peak day data was adjusted to account for fluctuations in our reservoir levels.

### 2004 PEAK DAY AND AVERAGE DAY WATER USE PER MONTH



## THE TREATMENT PROCESS

**1** Treatment begins when lime, in the form of slakened quicklime (CaO), is mixed with raw water in one of our two solids contact basins. Each basin holds about half a million gallons of water.

**2** The lime and water mixture causes the pH in the water to rise, and calcium and magnesium (the main components of hardness) to form insoluble particles called flocs. As these floc particles grow in size, they settle to the bottom of the solids contact basins. The solids are removed, dewatered and used as a USDA-approved source of lime by Minnesota farmers to stabilize the pH in farm fields.

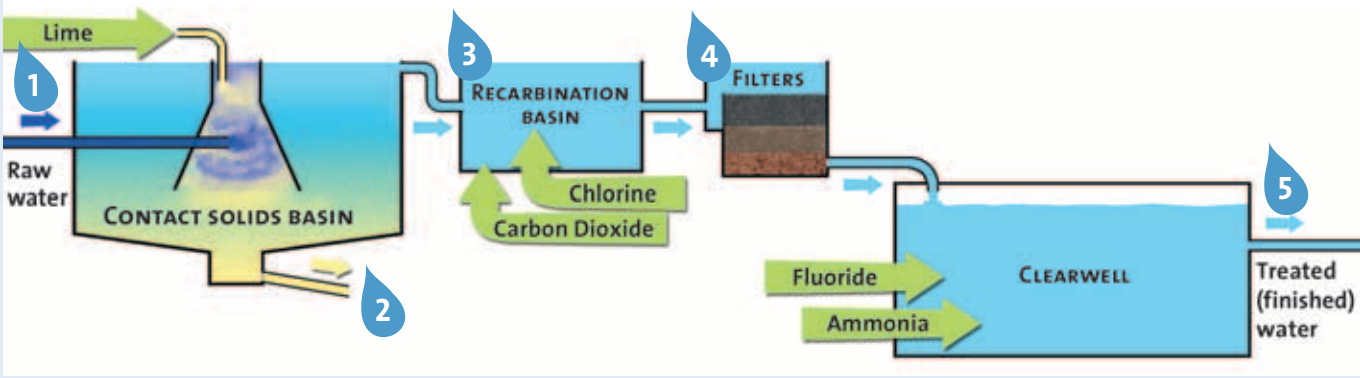
**3** The water enters a recarbonation basin where it is adjusted to the proper pH by adding carbon dioxide. A precise amount of chlorine is added to discourage bacterial growth as the water travels through our distribution system.

**4** The water is filtered to remove any remaining particles. And finally, it enters an underground reservoir called a clearwell where a small quantity of fluoride and ammonia are added. Fluoride promotes strong teeth and bones; ammonia works with the chlorine as a disinfectant. Now softened and disinfected, the water is ready for use by Bloomington residents and businesses.

## HOW SOFT IS OUR WATER?

Bloomington is one of the few water utilities in Minnesota that supplies softened water to its consumers. Untreated groundwater water enters the water plant plant with a hardness of about 19 grains (320 parts per million). Our treatment process reduces the water's hardness to about 5.2 grains (90 parts per million).

**5** The finished water from our treatment plant is pumped into the distribution system, where it is mixed with treated water purchased from the City of Minneapolis.



Nearly 97 percent of the world's water is saltwater or otherwise undrinkable. Another 2 percent is held in ice caps and glaciers. That leaves just one percent for all of humanity's needs – agricultural, residential, manufacturing and community needs.

United States Geological Survey



## A CAREER IN THE WATER INDUSTRY IS WAITING FOR YOU!

ST. CLOUD TECHNICAL COLLEGE'S WATER Environment Technologies (WETT) program provides you with the skills you need to land a great job in this rapidly growing industry.

There are many benefits to this program:

- Hands-on learning.
- 12 month program.
- Metro and St. Cloud location.
- 100 percent placement rates.

CALL ST. CLOUD TECHNICAL COLLEGE  
1-800-222-1009, EXT. 5952